Session 608

Solutions With WebObjects

Robb Beal
Systems Engineer, Apple iServices

Introduction

- Examples and case studies of how WebObjects has been used to bring information to the web, streamline business operations, and solve real world problems

What You'll Learn

- Innovative ways that WebObjects is being utilized
- WebObjects solves myriad business needs
- WebObjects projects have high success rates

VRWay International

Brian Fitzpatrick
Senior Consulting Engineer, Apple iServices

Introduction

- Basic premise: QuickTime VR tours of European cities
- Client needed a back office application for data entry, and a consumer application for presentation

VRWAY the experience

become a vrway citizen

▶ VRWAY helps your business

SEARCH MAPS CHANNELS ABOUT US

quick search GO

STEP INTO 360° VIRTUAL REALITY

VRWAY brings the world to you. Cities, shops, landscapes, people are ready for you to explore in virtual reality.
This is just the beginning.
The world's top VR photographers are adding new destinations day by day… until the whole world will be brought to your screen!
There's no easier way to travel! Enjoy.

enjoy!!!
http://vrm.vrway.com

Choose a Country | Choose a City | GO

Get QuickTime4 by clicking here.

Legal Notices © 2000 VRWAY

VRWAY the experience

become a vrway citizen

▶ VRWAY helps your business

SEARCH MAPS CHANNELS ABOUT US

ZOOM OUT HELP

DESTINATION

SEARCH

World > Europe

Europe

Europe is the second smallest continent in the world but the second largest populated. Birthplace of ancient civilizations, leader in art, music and literature and an economic powerhouse, the old continent is still the hub of the developed world.

From the northeastern slopes of the Ural mountains in Russia, Europe's surface extends to Cabo da Roca in Portugal and the Atlantic coast. Cape Nordkinn in Norway is the northernmost point and Punta de Tarifa near Gibraltar, in Spain, the southernmost.

DESTINATION

SEARCH

ITALY

Full country name:	Republic of Italy - *Repubblica Italiana*
Area:	116,303 sq. miles. [301,225 sq. km]
Population:	56,735,130 (July 1999 est.)
Population density:	191.4 per sq. Km.

VRWAY the experience

become a vrway citizen

▶ VRWAY helps your business

SEARCH MAPS CHANNELS ABOUT US

ZOOM OUT HELP

DESTINATION

SEARCH

World > Europe > Italy > Lazio > Rome

Rome

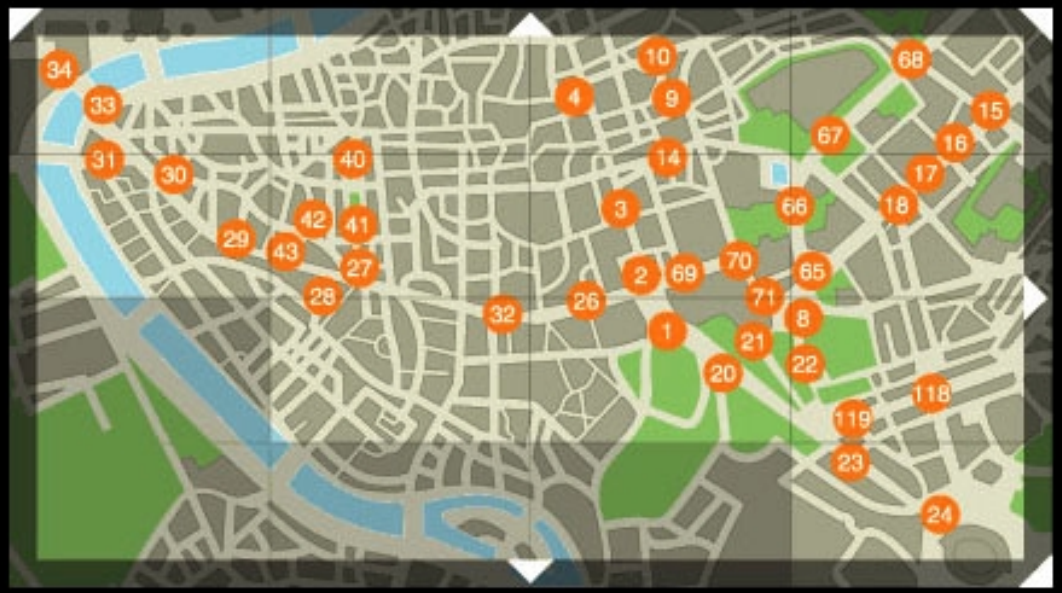
Capital of modern Italy and heart of an ancient empire, Rome is a city where past and present meet. Called the Eternal City, Rome was founded in 753 BC and went on to become the seat of the Roman Empire, the center of the Roman Catholic church and, in modern times, the capital of Italian cinema. Much of Rome's extraordinary history is still in evidence. The spectacular ruins of the Coliseum and the Forum bring back the days when Rome ruled a large part of the Old World and there are monuments to the various emperors all over the city. But Rome is not just a cultural theme park: it's a living, noisy, vibrant city where history is always present but time never stands still.

VRWAY the experience

become a vrway citizen

▶ VRWAY helps your business

SEARCH MAPS CHANNELS ABOUT US



ZOOM OUT HELP

DESTINATION

SEARCH

World > Europe > Italy > Lazio > Rome

SORT BY Numeric Order

OUTSIDE INSIDE

Street

1. Piazza Venezia / Altare della Patria
2. Piazza Venezia
3. San Marcello al Corso, church

VRWAY the experience

become a vrway citizen

▶ VRWAY helps your business

SEARCH MAPS CHANNELS ABOUT US

MULTIMEDIA GALLERY

REVIEW THIS QTVR

HELP CHAT RATE THIS VR

World > Europe > Italy > Lazio > Rome > Piazza Navona

OUTSIDE MAP

Piazza Navona

Photo by Claudio Bader - claude@webidentity.com

How to navigate through QTVR

Click on the image and drag the mouse in the desired direction (left, right, up or down) or, you can use the controller in the left-hand corner below the image. To make the image spin continuously, position the pointer over the directional arrows of the controller. Also, zoom in and out of the image utilizing the controller. Discover the hot spots that allow you to navigate through the linked VRs. As you move around the image, the pointer changes when it identifies a hotspot through which a linked environment can be accessed.

quick search GO

Legal Notices © 2000 VRWAY

Technology Framework

- WebObjects, QuickTime, and Mac OS X, Oracle database, Apache
- Designed to scale to 600 concurrent users
- 4 G4 appservers with the ability to saturate a 32Mbps link

Unique Problems Solved

- Used a WebObjects application to tie sets of QuickTime VRs together—All navigation mediated through the application
- Country/region navigation uses dynamically created imagemaps
- WebObjects allowed the client to change navigation and add VRs on the fly

Reusability

- Placed reusable objects into Frameworks
  - Components
  - Widgets
  - Chat objects

Maintainability

- Object-Oriented design and use of reusable components provided an extremely malleable set of applications
- Future features took considerably less time
- Took less than 10 developers under 4 months to design, implement, test, and deploy

University of Michigan Student Portal

Bob Frank
Senior Consulting Engineer
Apple iServices

expand your horizons

my.umich

home

customize pages | home

logout | list of services | feedback | help

making U-M history

U of M Chronology, 1910/11

Harry B. Hutchins, named 6th UM President

e-mail

go to full view

You have 1556 unread messages.

Compose a new message

to-do list

go to full view

- 10.10 Drop class
- 11.2 long task typed with noisy cat
- 11.2 very long descriptoin with a lot of text that goes on and on and on and ...
- 01.10 Whither whimsically whilst wascally wabbits watch
- 04.18 Pay fees for next year

Test Folder 1

trash

Add a new task.

U-M highlights

Michigan repeats as College Bowl Champions 05/07/01

calendar

go to full view

events for Wednesday, May 9, 2001

12:00 a.m. - 10:59 a.m.		
11:00 a.m.	Comp Sci 282	
12:00 p.m.		
1:00 p.m.	Math Review Session	Quake Fest
2:00 p.m.		
3:00 p.m.		
4:00 p.m.	Physics 318	
5:00 p.m.		
6:01 p.m. - 11:59 p.m.		

Add a new event.

classifieds

go to full view

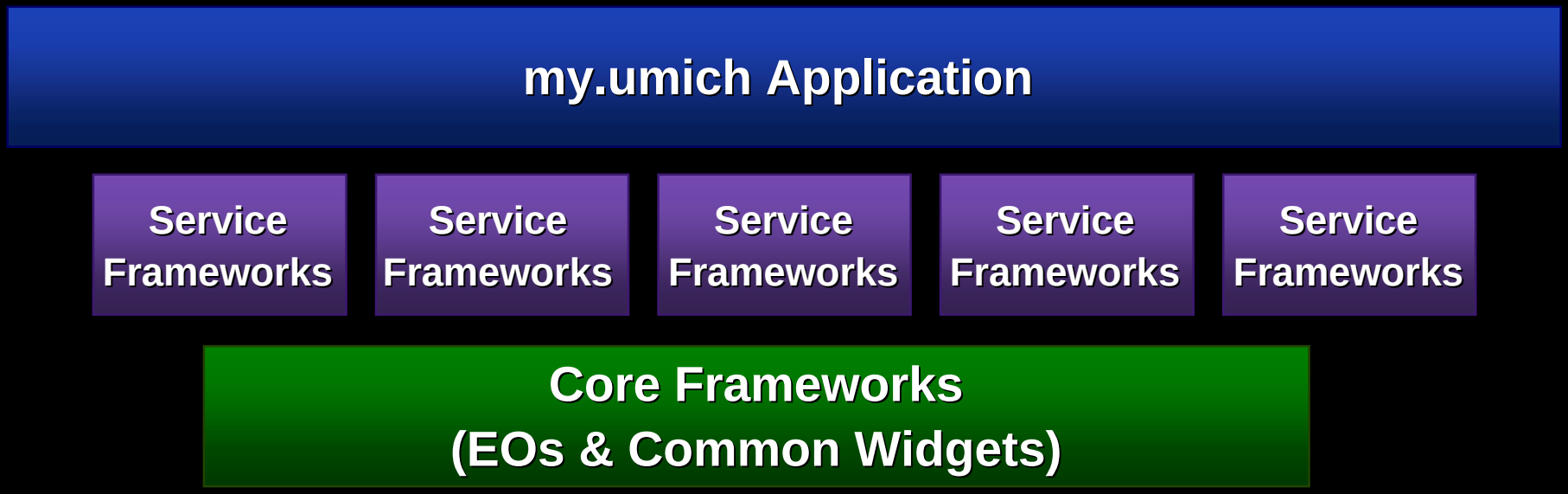
These are the most recent postings.

posting date	subject	price	user
housing > sublets			
Wed May 09, 2001	Summer sublet (July-August), contact now!	$250.00	kalapol
classified #2230	Subletting one bedroom in a two-bedroom apartment in building on Hill Street, between Packard and S. Division. Five minutes walk to Central Campus. Very spacious. Fully furnished. Amenities include: heat, hot and cold water, air conditioning, carpet, blinds, garbage disposals, on-site parking, on-site laundry, cable TV, own phone number in bedroom, cats welcome. Please contact kalapol@umich.edu or 734-769-2923 NOW!!!		

University of Michigan

- my.umich = student portal
- Proof of concept by AiS
  - Spring 2000
- Joint development
  - June 2000–February 2001

Basic Architecture



Key Features

- Security
- Web-mail
- Address Book
- Calendar
- Course Schedule
- To-do List
- Portable Bookmarks
- Classified Ads
- News
- Campus Announcements
- Class Announcements

Data Sources

- Several Oracle DBs
- XML feeds
- Lotus notes
- IMAP
- LDAP

Development Environment

- Cross platform: Mac OS X Server and NT
- CVS
- Central Application
  - Few core frameworks
  - Individual frameworks per service
- Frameworks allow much parallelism
- Integrated bug tracker and exception logger

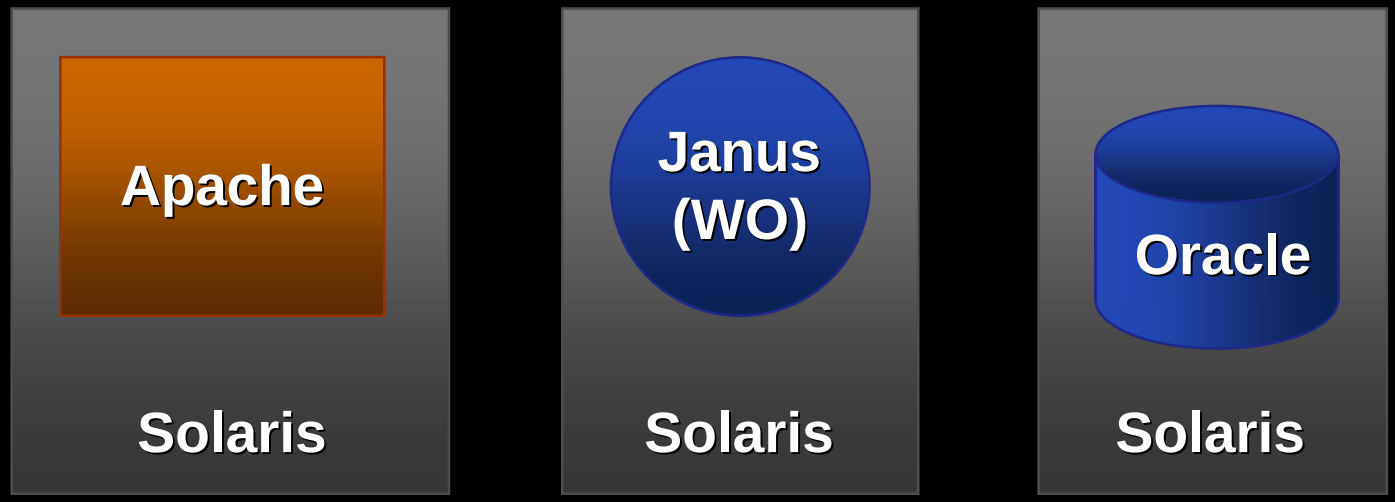
Team Composition and Roles

- Joint development effort between AiS and University of Michigan
- Wide range of developers
  - AiS consultants and trainers
  - U of M staff
  - Student interns

Development Integration Server Configuration

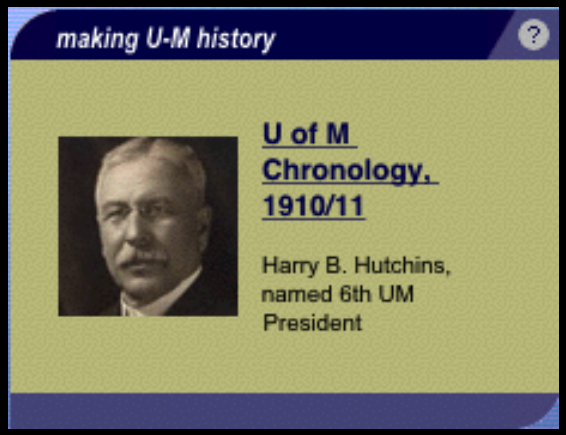
- Apache on Solaris
- WebObjects on Solaris
- Oracle on Solaris

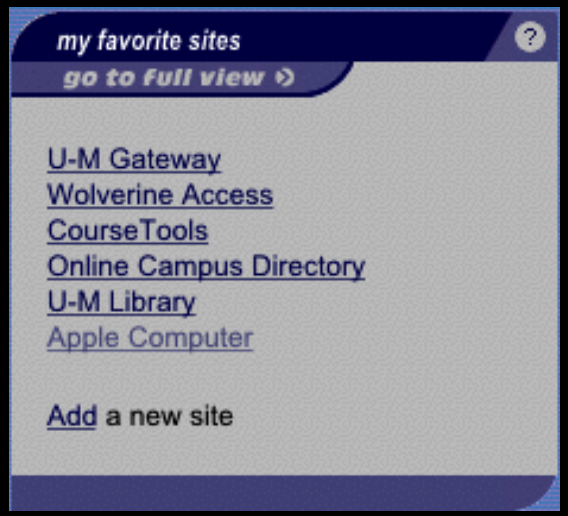
Staging and Deployment Server Configurations

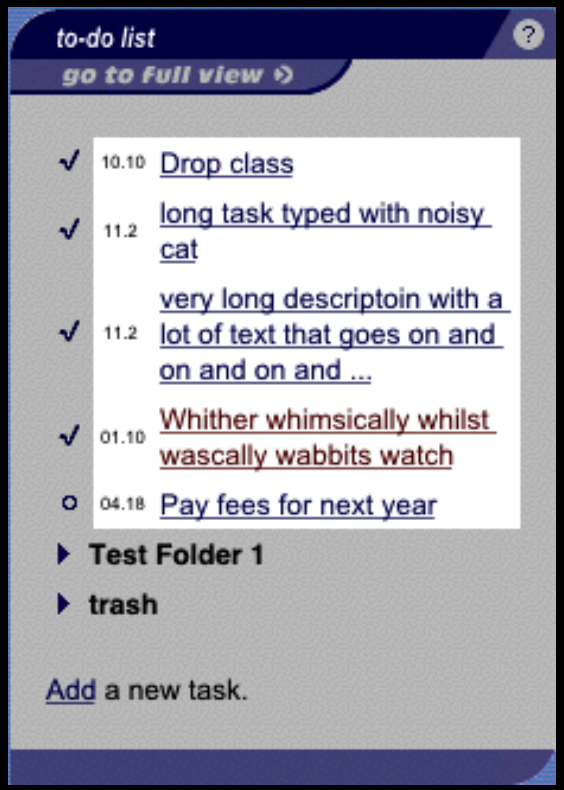


Kerberos-ized Login

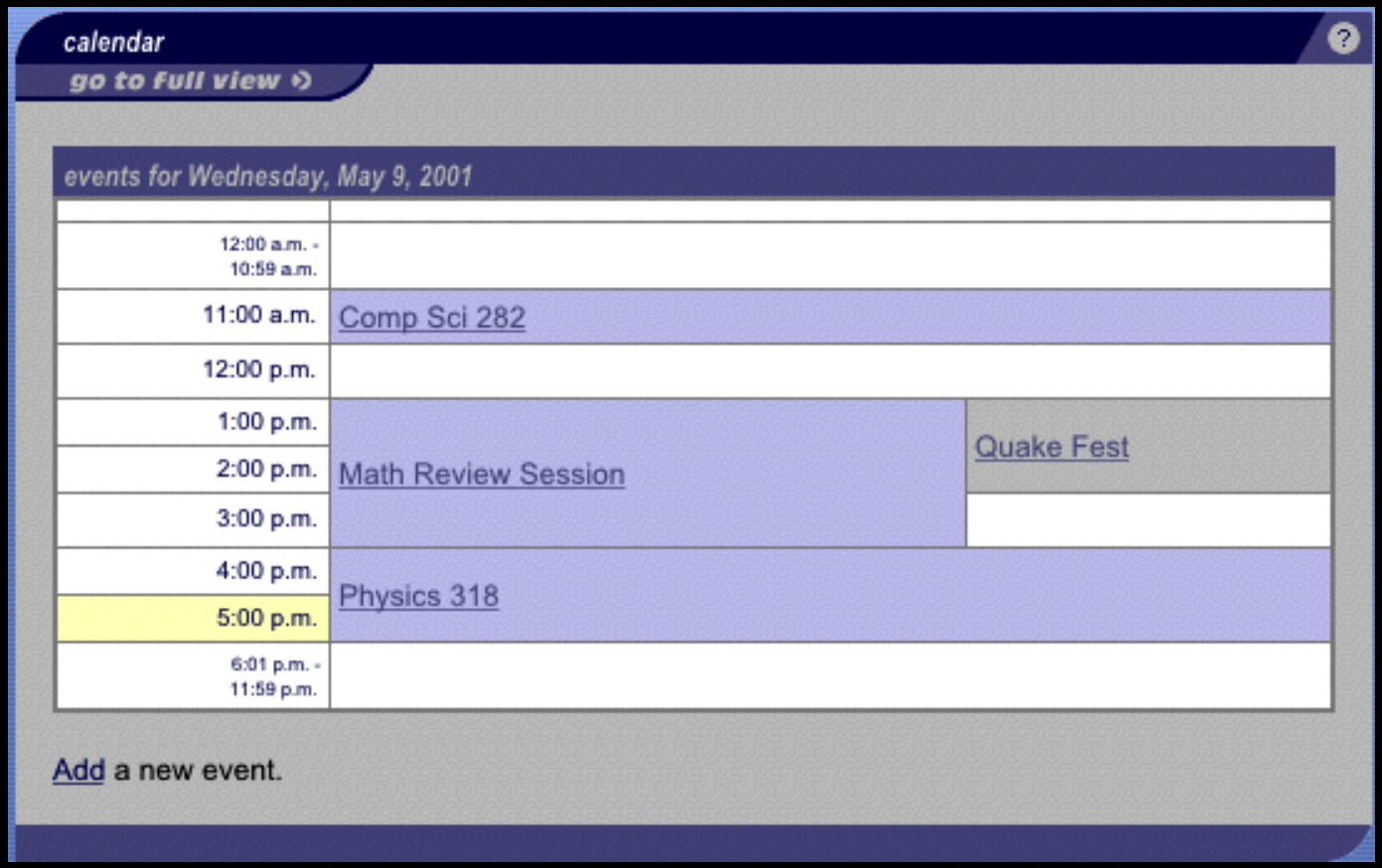
“Mini-Views” Front Page







Wide Views on Front Page



Mini Help

Help Button

Full Help System

help areas

- * overview of my.umich
- calendar
- classifieds
  - **classifieds quick tour**
  - What is the Classifieds service?
  - Appropriate use of classifieds
  - Opening the Classfieds service
  - Reading the classifieds
  - Finding particular ads

back to - **classifieds** | back to - **classifieds** (in a new window)

help for > classifieds

Appropriate use of classifieds

The University's Proper Use Policy and Guidelines for Responsible Use describe the responsible, ethical, and legal use of computing resources -- including my.umich classifieds -- for the protection of all users. We encourage you to read these documents and help us maintain an open community of responsible users.

See IT Policies and Guidelines for these and other policies concerning the appropriate use of U-M information technology resources.

To report suspected violations of University information technology policy, send e-mail to the User Advocate (itua@umich.edu. For more information about the User Advocate, see the User Advocate Web page.

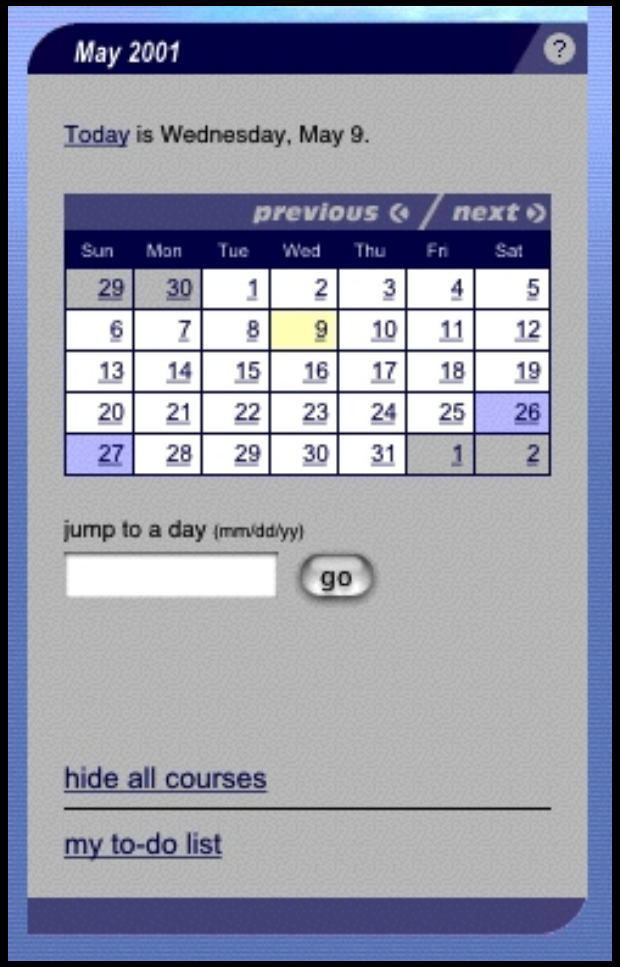
Previous Topic
What is the Classifieds service?

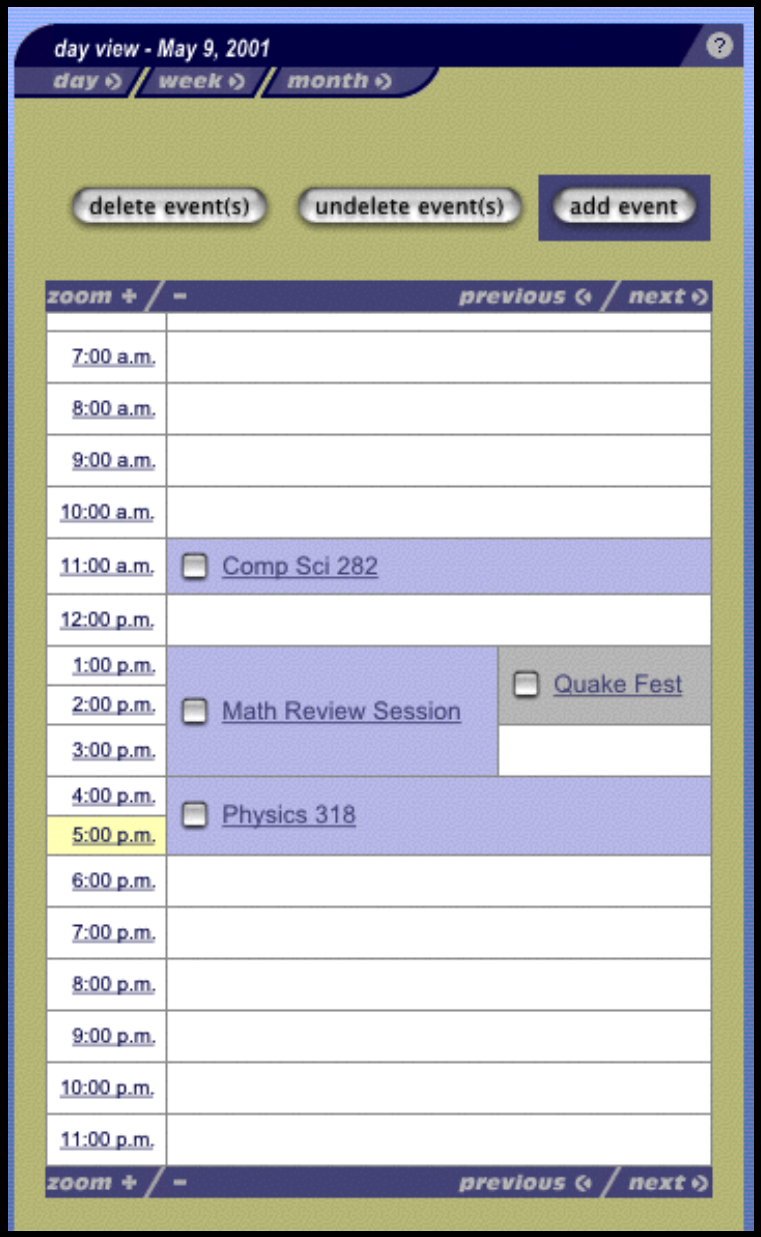
Next Topic
Opening the Classfieds service

Integrated Help

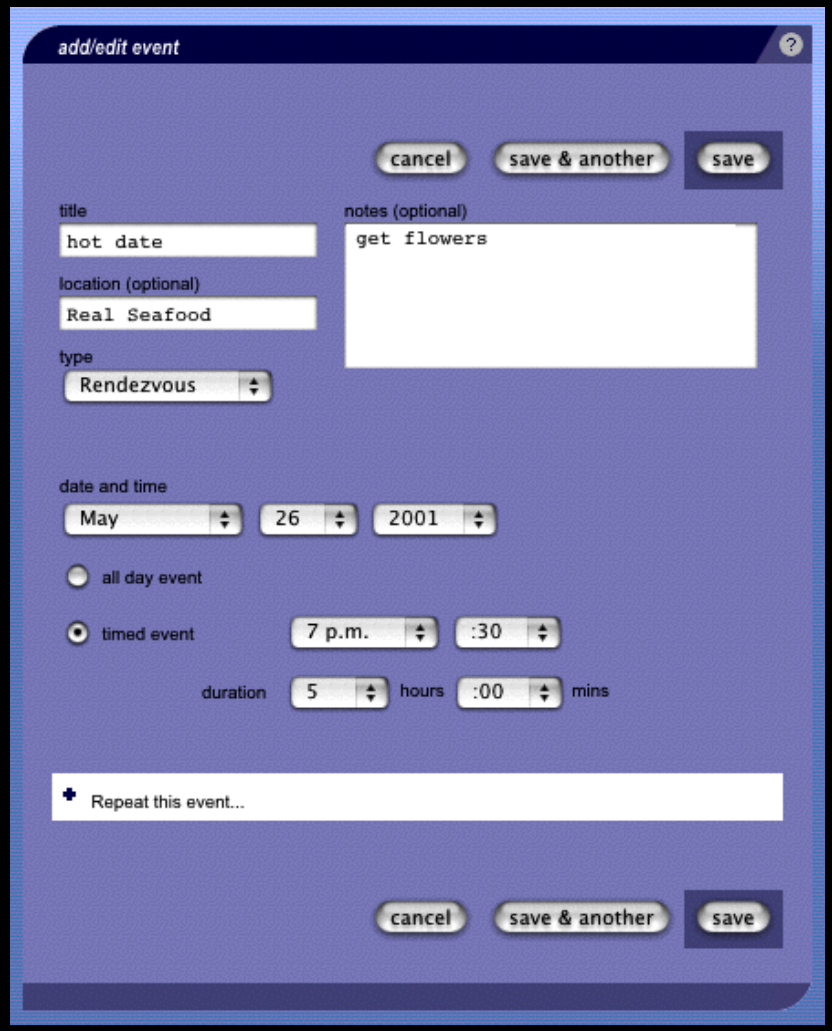
- Reduces calls to help desk
- Easily augmented
  - Especially when adding new features

Calendar


May 2001
Today is Wednesday, May 9.
previous / next
Sun Mon Tue Wed Thu Fri Sat
29 30 1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30 31 1 2
jump to a day (mm/dd/yy)
go
hide all courses
my to-do list


day view - May 9, 2001
day / week / month
delete event(s)
undelete event(s)
add event
zoom + / -
previous / next
7:00 a.m.
8:00 a.m.
9:00 a.m.
10:00 a.m.
11:00 a.m.
Comp Sci 282
12:00 p.m.
1:00 p.m.
2:00 p.m.
3:00 p.m.
Math Review Session
Quake Fest
4:00 p.m.
5:00 p.m.
Physics 318
6:00 p.m.
7:00 p.m.
8:00 p.m.
9:00 p.m.
10:00 p.m.
11:00 p.m.
zoom + / -
previous / next

Calendar–Add Event



Calendar

- Class schedule from Student Information System
- Part of web PIM
- Long-term design goal is to provide
  - Calendar, address book, to do list, etc.
  - Integration with popular PIMs

Mail Message List

INBOX (1661 messages)

10 messages per page page < 1 2 3 4 5 6 7 8 9 >

save to : [select a folder to save to] delete undelete

		from / subject	date	size
	N	darwin-development-request@lists.apple.com darwin-development digest, Vol 2 #480 - 13 msgs	05/9/01 01:17 PM	24 k
	N	Ian Ollmann Re: 16 bit constants	05/9/01 12:58 PM	2 k
	N	Holger Bettag Re: 16 bit constants	05/9/01 12:18 PM	1 k
	N	Holger Bettag Re: 16 bit constants	05/9/01 12:05 PM	3 k
	N	Ian Ollmann Re: 16 bit constants	05/9/01 12:05 PM	2 k
	N	Paul Russell Re: 16 bit constants	05/9/01 11:21 AM	2 k

View Mail

commands

compose message

refresh mailbox

purge deleted

folders

add / edit folders

Darwin Digests
Drafts
INBOX
not
PamTest
Sent Items
someFolderOrOther
theOldInbox
Trash
ZZZZZTemp

INBOX > Re: 16 bit constants

previous message next message

reply reply to all forward delete

save to : [select a folder to save to]

from Ian [illegible] <sisiar@[illegible]tech.edu>
date Wednesday, May 9, 2001 12:58 PM
to Altivec Forum <altivec_forum@forum.altivec.org>
subject Re: 16 bit constants
more message information

On 9 May 2001, Holger Bettag wrote:

> Ian [illegible] <sisiar@[illegible]tech.edu> writes:
>
> [...]
> > One could even make a table of all of the vectors accessible in 4
> > cycles or less.
> >
> Hmm. I guess the size of the finished table would be manageable, but
> testing 2^128 cases might take a bit longer. :-)

How do you come up with 2^128? I was proposing that you write a program to iterate through all reasonable instructions out to a depth of up to four cycles. Every time you get a result, check a list of previous results to see if it is already there. If not, add it. The table will not be complete obviously, but if the entry isn't there, chances are you are better off just loading it from memory, since no reasonably quick sequence of instructions will generate it.

Compose Message

compose message

to

mfirlik@apple.com

cc

fitz@apple.com

bcc

subject

WWDC Demo

save a copy in "Sent Items" folder

Hey Guys,

How is your stuff going? I think that this presentation is going to be great.

Don't forget to bring the donuts.

attachments

1. choose file

Browse...

2. click attach

3. review attachments: (none)

cancel

send message

Classified Ads

ad categories

- automotive (11)
- books, movies, & music (18)
- computers (4)
- electronics (7)
- employment (1)
- housing
  - sublets (50)
  - roommate wanted (10)
- lost & found (0)
- other for sale
  - sports & hobbies (1)
  - clothing (1)
  - jewelry (1)
  - furniture (14)
  - pets (0)
  - services (1)
  - miscellaneous (4)
- tickets & travel (3)

view hotlist

you are viewing: housing > sublets

place ad | change posted ad status

sort by date/price/user — 10 ads per page

	posting date	subject	price	user
collapse	Wed May 09, 2001 classified #2230 add to hotlist	**Summer sublet (July-August), contact now!** Subletting one bedroom in a two-bedroom apartment in building on Hill Street, between Packard and S. Division. Five minutes walk to Central Campus. Very spacious. Fully furnished. Amenities include: heat, hot and cold water, air conditioning, carpet, blinds, garbage disposals, on-site parking, on-site laundry, cable TV, own phone number in bedroom, cats welcome. Please contact kalapol@umich.edu or 734-769-2923 NOW!!!	$250.00	kalapol reply to ad
expand	Wed May 09, 2001	**CHEAP, CENTRAL, VERY NICE APT. Available June 9- end of August**	$0.00	shiffus
expand	Tue May 08, 2001	**AVAILABLE NOW-- 3 BEDROOM CONDO STYLE APARTMENT**	$900.00	agarg
expand	Tue May 08, 2001	**1 bedroom apmt avbl 9/1/2001 for 12 months**	$590.00	cjeanner
expand	Tue May 08, 2001	**Single Room in Stockwell**	$0.00	pearsons
expand	Tue May 08, 2001	**Sublet NOW!!!!!!**	$175.00	nej
expand	Mon May 07, 2001	**NORTH CAMPUS AT 230USD**	$230.00	skarajan
expand	Mon May 07, 2001	**Housing needed: Sept 2001**	$600.00	cjeanner
expand	Mon May 07, 2001	**FREE HIGH SPEED INTERNET ACCESS with apartment.**	$275.00	myu
expand	Mon May 07, 2001	**summer term sublet $200 free utilities beat that! you can't!**	$200.00	pzhou

expand all ads | collapse all ads

page < 1 2 3 4 5 >

To Do List

navigation
all
unfiled (5)
trash (0)
Test Folder 1 (1)
my calendar

all tasks
folders...
add task
date > priority > completed
sort
hide completed
10.10 Drop class
+ notes
11.2 long task typed with noisy cat
+ notes
11.2 very long descriptoin with a lot of text that goes on and on and on and ...
+ notes
01.10 Whither whimsically whilst wascally wabbits watch
+ notes
04.18 Pay fees for next year
+ notes
Test Folder 1
trash
expand all
collapse all
folders...
add task

Bookmarks

my favorite sites
add site
add folder
empty trash
expand folders: all | visible collapse folders
expand sites: all | visible collapse sites
sort by date / title / rank
Apple Computer
remove from mini view
edit
Janus (secure)
add to mini view
JanusApp on mclaury
JanusBeta
JanusEditor on mclaury
Macintosh Products Guide
Monitor for WebObjects 4.5
test
University of Michigan Secure Webspace Login Sc
Apple
Hardware Developers
Macintosh Publications
Multimedia
Software Developers
Suggested Sites
Support and Information
Toolbar Favorites
Where to Buy Macintosh Products
trash (1 item)
import sites

Modular and Flexible

- Goal is to continually add services
- Future integration with other University Services
  - Not re-writes, but integration and re-use of existing backend systems

Logistics Management With WebObjects

David Black
Consultant, Apple iServices

Logistics Management

- The business of moving stuff around
- Provide the “physical” aspect of supply-chain management by working with partners, vendors and subcontractors in various countries around the world

Critical Requirements

- Accessibility
- Scalability
- Interoperability
- Rapid development
- Rapid adaptability

Environment

- Solaris for test and production applications
- Oracle on HP-UX
- Development on Windows NT
- Version control with CVS and CVL
- 2–8 Consultants on site

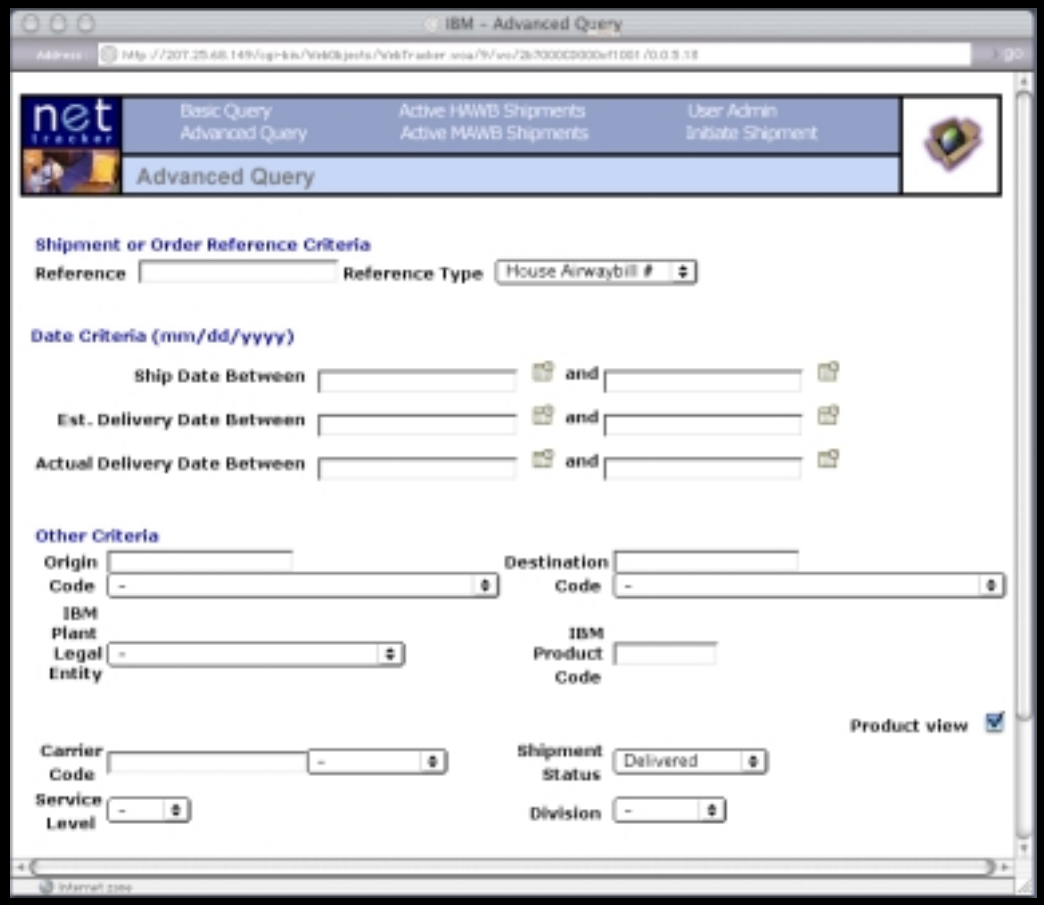
Common Frameworks

- All applications shared a couple of frameworks that saved months of development time and testing
  - Security and authentication
  - Personalization
  - LogisticsKit

Common Architecture

Logistics Application Architecture

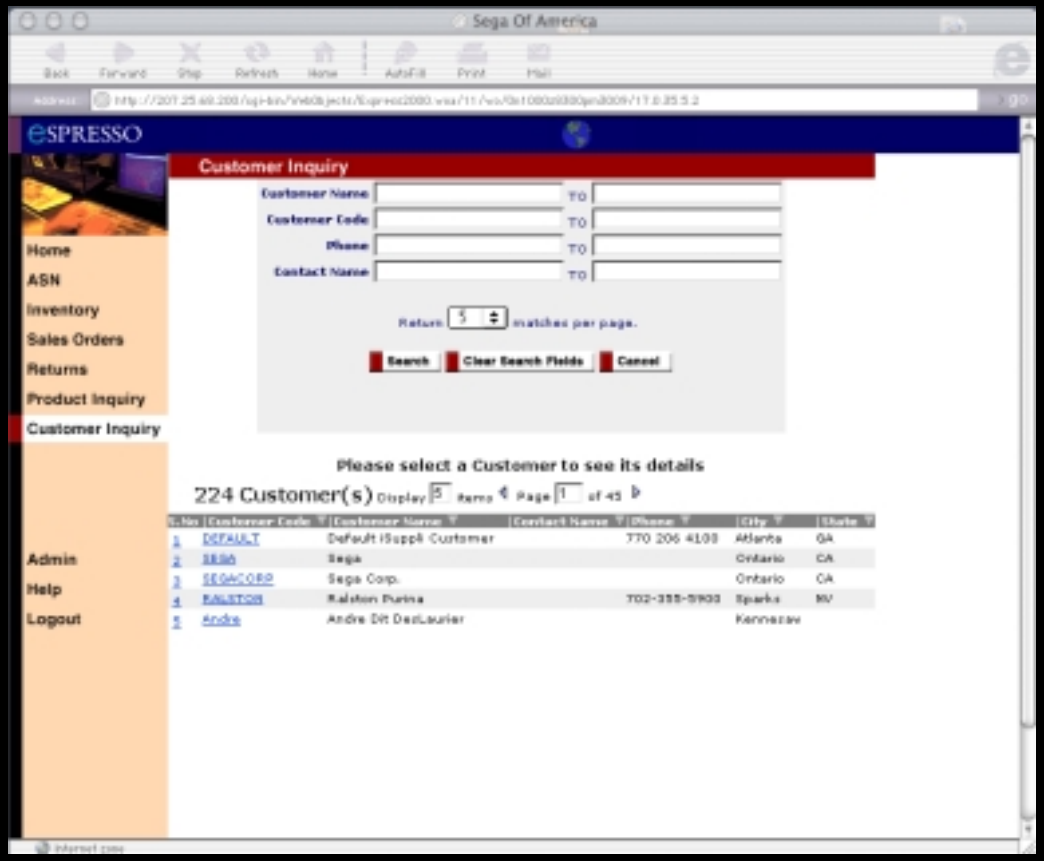
Shipment Tracking



NetTracker

- Allowed the entry and tracking of shipments
- Gave views into legacy systems and worked in parallel with legacy client user interfaces
- Could be customized for a new customer in couple weeks

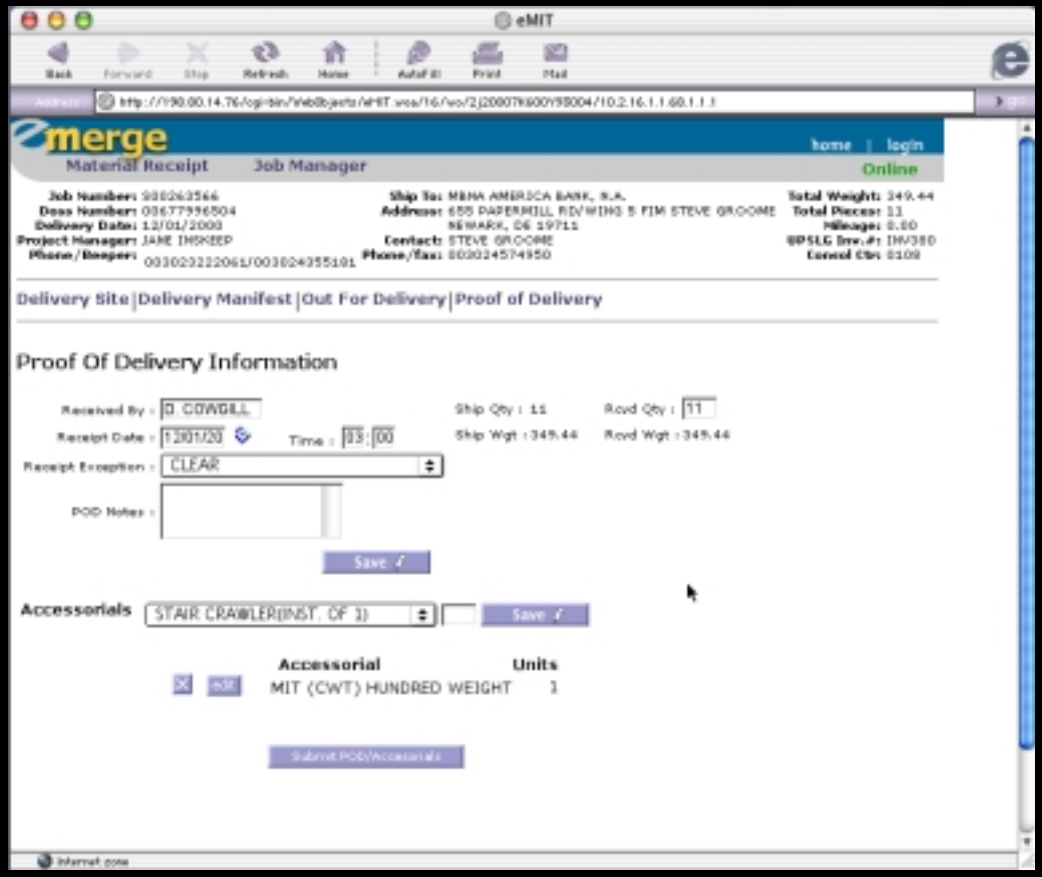
Return Tracking



Espresso

- Managed the Return Merchandise Authorization (RMA) process for companies

Consolidation Management



eMerge

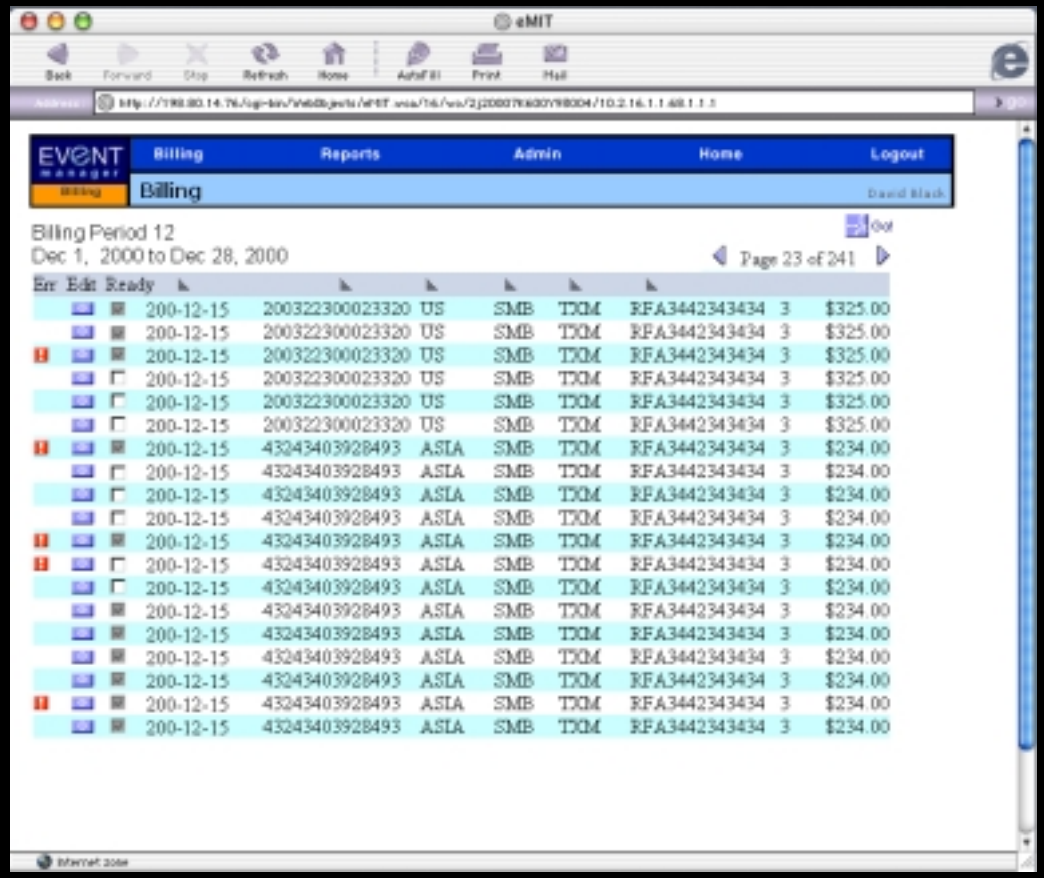
- Gave visibility and control to the customer to manage time-sensitive delivery operations
- Required a custom database adaptor to integrate with another system
- Saved customer millions of dollars in warehousing

Decision Support Tools

Reportix

- A generic, web-based reporting tool that worked with many of the applications
  - Allowed ad hoc queries against millions of rows
  - Used ReportMill to generate great looking PDF reports
  - Could be integrated with a new application within a couple days

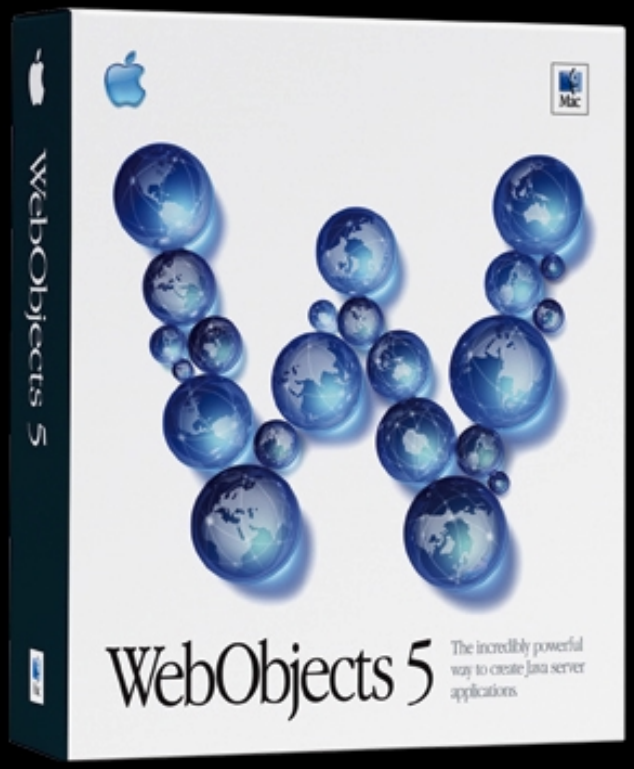
Finance and Billing Tools



NetTracker Billing

- Reduced analysis time from 9 man-weeks to 1 man-day
- Developed a special data-browsing framework that let a user visually inspect thousands of shipments at a time while keeping a small memory footprint

In Conclusion



Build Online by Modern Postcard

Ricardo Flores
Consulting Engagement Manager
iServices

Introduction

- Who is Modern Postcard?

Introduction

- Who is Modern Postcard?
- What is “Build Online”?

Goal: Driving Revenue

- Market penetration is the key

Goal: Driving Revenue

- Market penetration is the key
  - Individuals sending cards

Goal: Driving Revenue

- Market penetration is the key
  - Individuals sending cards
  - Real Estate community marketing

Goal: Driving Revenue

- Market penetration is the key
  - Individuals sending cards
  - Real Estate community marketing
  - Artistic and Design community

Goal: Driving Revenue

- Market penetration is the key
  - Individuals sending cards
  - Real Estate community marketing
  - Artistic and Design community
  - Corporate community

Critical Requirements

- On-time and rapid development

Critical Requirements

- On-time and rapid development
- Application scalability

Critical Requirements

- On-time and rapid development
- Application scalability
- Streamlined UI

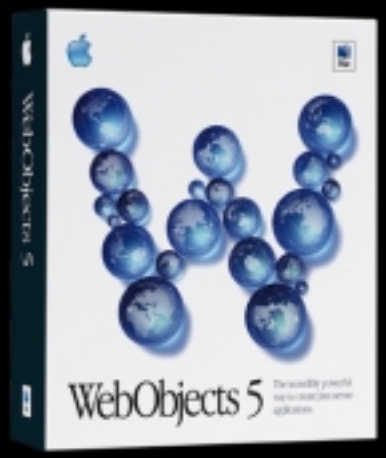
Critical Requirements

- On-time and rapid development
- Application scalability
- Streamlined UI
- Interface with existing backend processes

Critical Requirements

- On-time and rapid development
- Application scalability
- Streamlined UI
- Interface with existing backend processes
- Real-time preview capability

Achieving These Requirements



Welcome to Build Online

Back Forward Stop Refresh Home AutoFill Print Mail

Address: http://qd.modernpostcard.com/bol/ go

Welcome to

Modern Postcard's

Build Online™

Build your postcard with free images online.

Enter >>

POWERED BY WebObjects

Developed by Apple® iServices exclusively for Modern Postcard®

Internet zone

Real-Time Preview

- Finished Postcard

Real-Time Preview

- Finished Postcard
  - A series of dynamically nested Flash movies

Real-Time Preview

- Finished Postcard
  - A series of dynamically nested Flash movies
  - This allows for the ability to edit content and appearance in real time

Real-Time Preview

- Finished Postcard
- Finished Postcard gets SWF from WO Direct Action

Real-Time Preview

- Finished Postcard
- Finished Postcard gets SWF from WO Direct Action
  - Several advantages to using Direct Action

Real-Time Preview

- Finished Postcard
- Finished Postcard gets SWF from WO Direct Action
  - Several advantages to using Direct Action
  - Main benefit for us is statelessness

Real-Time Preview

- Finished Postcard
- Finished Postcard gets SWF from WO Direct Action
- Direct Action creates the WOResponse containing the SWF

Real-Time Preview

- Finished Postcard
- Finished Postcard gets SWF from WO Direct Action
- Direct Action creates the WOResponse containing the SWF
  - Creates a new WOResponse

Real-Time Preview

- Finished Postcard
- Finished Postcard gets SWF from WO Direct Action
- Direct Action creates the WOResponse containing the SWF
  - Creates a new WOResponse
  - Sets the content to SWF

Real-Time Preview

- Finished Postcard
- Finished Postcard gets SWF from WO Direct Action
- Direct Action creates the WOResponse containing the SWF
  - Creates a new WOResponse
  - Sets the content to SWF
  - Changes MIME type of new WOResponse to Flash

How Did We Get SWF?

- Started with XML

How Did We Get SWF?

- Started with XML
- Created custom framework to recompile XML to SWF

How Did We Get SWF?

- Started with XML
- Created custom framework to recompile XML to SWF
- Created the <TAG> tag

How Did We Get XML?

- Custom frameworks build XML from WO Components

How Did We Get XML?

- Custom frameworks build XML from WO Components
- Custom frameworks build XML from Flash

How Did We Get XML?

- Custom frameworks build XML from WO Components
- Custom frameworks build XML from Flash
  - Created a Flash decompiler

How Did We Get XML?

- Custom frameworks build XML from WO Components
- Custom frameworks build XML from Flash
  - Created a Flash decompiler
  - SWF decompiled to provide postcard specific XML values

That’s It!

- Take dynamically created XML

That’s It!

- Take dynamically created XML
- Convert it to SWF

That's It!

- Take dynamically created XML
- Convert it to SWF
- Get SWF using Direct Action

That's It!

- Take dynamically created XML
- Convert it to SWF
- Get SWF using Direct Action
- Push SWF content to browser

That's It!

- Take dynamically created XML
- Convert it to SWF
- Get SWF using Direct Action
- Push SWF content to browser
- Finished Postcard

WebObjects Lab

- Located downstairs in Room K
- Lab hours
  - Monday 12:00pm–6:00pm
  - Tuesday 10:30am–6:00pm
  - Wednesday 10:30am–6:00pm
  - Thursday 10:30am–6:00pm
  - Friday 10:30am–3:30pm

☑ Vote for WebObjects as Best App Server

http://developer.apple.com/webobjects

Roadmap

609 Developing Desktop Applications with WebObjects	Civic **Wed., 10:30am**
605 Moving to WebObjects 5	Room A1 **Wed., 2:00pm**
606 Direct to Java	Room A1 **Wed., 3:30pm**
FF111 Feedback Forum: WebObjects	Room A1 **Fri., 3:30pm**

Who to Contact

Toni Trujillo Vian
Director, WebObjects Engineering
webobjects@apple.com

Bob Frasier
WebObjects Product Manager
webobjects@apple.com

iServices Consulting, Integration, Training & Certification
(800) 848-6398
iservices@apple.com

For more information:
www.apple.com/webobjects
developer.apple.com/webobjects
www.apple.com/iservices
www.info.apple.com/webobjects

Subscribe to:
webobjects-announce@apple.com

Q&A

Bob Frasier
WebObjects Product Manager
webobjects@apple.com

http://developer.apple.com/events/urls.html

WWDC

Worldwide Developers Conference 2001